Docket No.: KC-18,708

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Oomman Painummoottil THOMAS Vasily Aramovich TOPOLKARAEV Glen Thomas MILDENHALL Tamara Lee MACE Hristo Angelov HRISTOV Dennis Lloyd HASHA
Serial No.:	10/749,148
Filing Date:	30 December 2003
Title:	ELASTOMER COMPOSITIONS AND METHOD OF MAKING THEM
Customer No.:	35844
Group No.:	1711
Examiner:	Olga Asinovsky

DECLARATION OF OOMMAN P. THOMAS UNDER 37 C.F.R. § 1.132

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

I, Oomman P. Thomas, hereby declare as follows:

1. I am employed by Kimberly-Clark Corporation as a Technical Leader. I have been employed by Kimberly-Clark Corporation for 11 years.

2. I obtained a B.S. degree in Chemistry from Kerala University, India, in the year 1971. I obtained a M.S. degree in Chemistry from Texas A&M University in the year 1979. I obtained a Ph.D in Polymer Science And Plastics Engineering from The University Of Massachusetts at Lowell in the year 1984.

I hereby certify that this paper is being facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Maxwell J Petersen

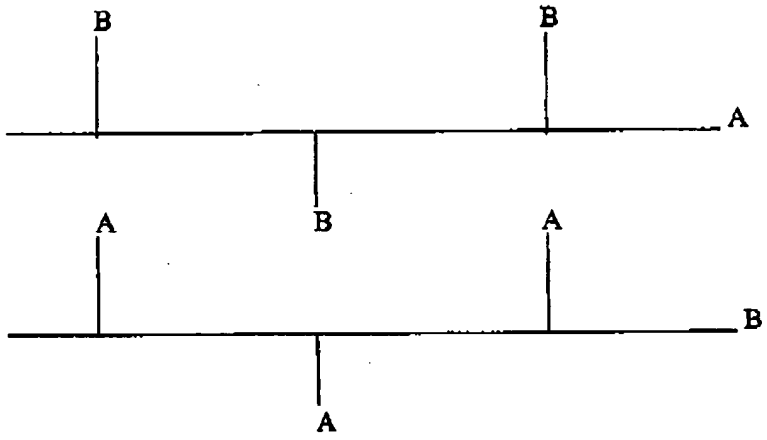
Type or print name of person signing certification

Maxwell J Petersen 11-10-06

Signature Date

3. I am familiar with and experienced in the fields of polymer science, polymer chemistry and polymerization.

4, The term "graft copolymer" as understood by persons skilled in the art does not refer to a mere blend of two polymers. Instead, the term refers to a chemical reaction product of a first polymer A and a second polymer B such that an end group of a block segment of one of the polymers becomes chemically linked ("grafted") to a backbone molecule of the other polymer. Representative molecular configurations of such graft copolymers are as follows.



5. Graft polymers are not automatically formed by the simple blending of two chemically inert polymers under standard extrusion conditions. Instead, as with all chemical reactions, graft copolymerization requires the existence of a palpable chemical reaction mechanism that is consistent with the principles of polymer chemistry, energy and thermodynamics.

6. One mechanism of achieving graft copolymerization involves solid state shear pulverization. As explained on page 8 of the specification, beginning at line 10, this mechanism requires combining two polymers, namely high and low performance elastomers, under extreme conditions of high torque, kneading and shearing. A high torque twin-screw extruder is equipped with co-rotating screws having a predetermined combination of kneading and shearing elements, as well as conveying elements. The screws are designed to produce high levels of torque and shear, and the twin screw extruder is operated under conditions that produce high torque and shear.

7. As is known in the art of twin screw extrusion, twin screw extruders can be assembled and reassembled using a large number of versatile screw elements arranged in two parallel screw shafts in a desired order. There are essentially three kinds of screw elements. Conveying elements are configured primarily to convey the polymer forward. Kneading elements have little or no conveying action, and are designed primarily to create high shear by heating and chopping the polymer. Reverse conveying elements or "seals" create localized regions of high pressure by temporarily preventing forward movement of the polymer. By placing sealing elements immediately downstream from kneading elements, the polymer pressure and shear can be maximized in regions occupied by the kneading elements.

8. By using a properly designed twin screw extruder, equipped with localized heating and cooling to optimize the level of shear, we (myself and other inventors) are able to cause chain scission of elastomer molecules that are typically chemically inert under milder extrusion conditions. The chain scission generates free radicals in the molecules of high performance elastomer and/or low performance elastomer. Free radicals are also generated along the backbones of elastomer molecules that are not scissioned. Molecules having free radicals along their backbone chain can then react with scissioned molecular segments having free radicals at their ends to form graft copolymers. Free radicals exist at a higher energy, less stable state. By combining two free radicals to form a covalent bond, a lower energy thermodynamically stable state is established. Coupling of two chains of the high performance and low performance elastomer moieties as well as intra coupling are also possible in this scheme.

9. I have studied the Office Action dated 08 September 2006 and the cited prior art reference, U.S. Patent 6,479,154 to Walton et al. Based on my review of the Office Action, the Examiner has merely assumed that two polymers mixed together as disclosed in Walton et al. will chemically react to form graft copolymers. However, the Examiner has produced no evidence that graft copolymerization occurs under conditions disclosed in Walton et al., and has not set forth a palpable chemical reaction mechanism that can be supported by principles of polymer chemistry, energy and thermodynamics.

10. Walton et al. does not disclose conditions of high shear, or other extrusion conditions that would cause chain scission and/or free radical generation in the disclosed polymers. Without free radical generation, there is no basis for the Examiner's assumption that graft copolymers are automatically formed by Walton et al.

11. A primary objective of Walton et al. is to produce a high quality breathable elastomeric film for use in conformable garments and personal care products. It is generally known in the art of film extrusion to optimize extrusion conditions to avoid or minimize degradation of the polymers being extruded. Unless the reference expressly states otherwise, a person or ordinary skill in the art would not equate a conventional film extrusion process with a solid state shear polymerization process, and would not understand the film extrusion process to form graft copolymers from the polymers being extruded.

12. All statements herein based on my own knowledge are true, and all statements made on information and belief are believed to be true. I acknowledge that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. § 1001) and may jeopardize the validity of this patent application or any patent issuing thereon.

13. Because of my unfamiliarity with the preparation of legal documents, I have been assisted in drafting this Declaration by an attorney of record, Maxwell J. Petersen.

Respectfully submitted,

Oomman P. Thomas

Date: 09 Nov. 2006